THIS PAGE IS INSERTED BY OIPE SCANNING AND IS NOT PART OF THE OFFICIAL RECORD

Best Available Images

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

BLACK BORDERS

TEXT CUT OFF AT TOP, BOTTOM OR SIDES

FADED TEXT

BLURRY OR ILLEGIBLE TEXT

SKEWED/SLANTED IMAGES

COLORED PHOTOS HAVE BEEN RENDERED INTO BLACK AND WHITE

VERY DARK BLACK AND WHITE PHOTOS

UNDECIPHERABLE GRAY SCALE DOCUMENTS

IMAGES ARE THE BEST AVAILABLE COPY. AS RESCANNING *WILL NOT* CORRECT IMAGES, PLEASE DO NOT REPORT THE IMAGES TO THE PROBLEM IMAGE BOX.

EUROPEAN PATENT OFFICE

\bstracts of Japan

TION NUMBER : 11084234
TION DATE : 26-03-99

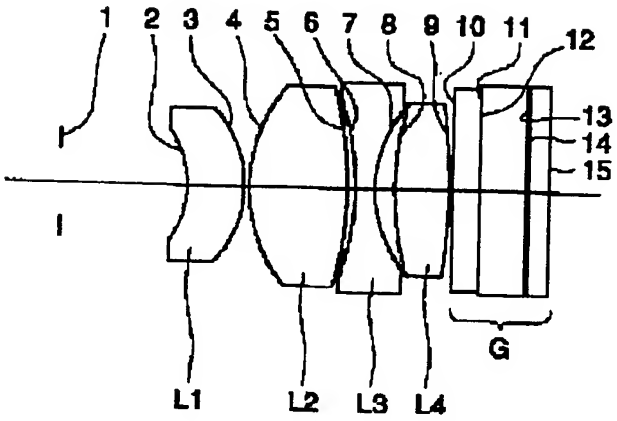
TION DATE : 02-09-97
TION NUMBER : 09237042

NT : KONICA CORP;

R : MORI NOBUYOSHI;

: G02B 13/18

: PHOTOGRAPHING LENS



:T : PROBLEM TO BE SOLVED: To provide a photographing lens comparatively wide in the angle of view, high in image formation performance and short in entire length.

SOLUTION: This photographing lens is composed of an aperture diaphragm, a 1st lens group L1 consisting of a meniscus lens turning its concave surface to an object side, a 2nd lens group L2 having positive refractive power and consisting of at least one positive lens, a 3rd lens group L3 having negative refractive power and consisting of a single lens, and a 4th lens group L4 having the positive refractive power and consisting of one positive lend in order from the object side; and satisfies a conditional expression $-3.0<f/f_3<-1.2$ when the focal distance of the 3rd lens group L3 is f_3 and the focal distance of an entire optical system is (f).

COPYRIGHT: (C)1999,JPO